

10674450\_CLS.txt  
Most frequently occurring classifications of patents returned  
from a search of 10674450 on Jun 18 , 2007

Original Classifications

8	704/219
8	704/222
4	704/220
3	704/226
3	704/200.1
2	704/207
2	704/201
2	704/223
2	704/216

Cross-Reference Classifications

15	704/219
12	704/223
6	704/226
6	704/220
5	704/208
4	704/222
3	704/233
3	704/201
3	704/227
2	704/232
2	704/207
2	704/230
2	704/250
2	704/255
2	704/205
2	704/229
2	704/228
2	704/221

Combined Classifications

23	704/219
14	704/223
12	704/222
10	704/220
9	704/226
5	704/201
5	704/208
4	704/233
4	704/207
4	704/200.1
3	704/227
3	704/229
3	704/221
2	704/202
2	704/232
2	704/230
2	704/248
2	704/250
2	704/253
2	704/255
2	704/205
2	704/216
2	704/228
2	704/203

Titles of most frequently occurring classifications of patents returned  
from a search of 10674450 on Jun 18 , 2007

23 704/219 (8 OR, 15 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/201 ..For storage or transmission  
704/219 ...Linear prediction

14 704/223 (2 OR, 12 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/201 ..For storage or transmission  
704/221 ...Pattern matching vocoders  
704/223 ....Excitation patterns

12 704/222 (8 OR, 4 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/201 ..For storage or transmission  
704/221 ...Pattern matching vocoders  
704/222 ....Vector quantization

10 704/220 (4 OR, 6 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/201 ..For storage or transmission  
704/220 ...Analysis by synthesis

9 704/226 (3 OR, 6 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/201 ..For storage or transmission  
704/226 ...Noise

5 704/201 (2 OR, 3 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/201 ..For storage or transmission

5 704/208 (0 OR, 5 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/201 ..For storage or transmission  
704/205 ...Frequency  
704/206 ....Specialized information  
704/207 .....Pitch  
704/208 .....Voiced or unvoiced

4 704/233 (1 OR, 3 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 .SPEECH SIGNAL PROCESSING  
704/231 ..Recognition  
704/233 ...Detect speech in noise

4 704/207 (2 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/205 ...Frequency  
 704/206 ....Specialized information  
 704/207 .....Pitch

4 704/200.1 (3 OR, 1 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/200.1 ..Psychoacoustic

3 704/227 (0 OR, 3 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/226 ...Noise  
 704/227 ....Pretransmission

3 704/229 (1 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/229 ...Adaptive bit allocation

3 704/221 (1 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/221 ...Pattern matching vocoders

2 704/202 (1 OR, 1 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/202 ...Neural network

2 704/232 (0 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/231 ...Recognition  
 704/232 ...Neural network

2 704/230 (0 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/230 ...Quantization

2 704/248 (1 OR, 1 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING

704/231 ..Recognition  
 704/246 ...Voice recognition  
 704/248 ....Endpoint detection

2 704/250 (0 OR, 2 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/231 ..Recognition  
 704/246 ...Voice recognition  
 704/250 ....Specialized models

2 704/253 (1 OR, 1 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/231 ..Recognition  
 704/251 ...Word recognition  
 704/253 ....Endpoint detection

2 704/255 (0 OR, 2 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/231 ..Recognition  
 704/251 ...word recognition  
 704/255 ....Specialized models

2 704/205 (0 OR, 2 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/205 ...Frequency

2 704/216 (2 OR, 0 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/211 ...Time  
 704/216 ....Correlation function

2 704/228 (0 OR, 2 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/226 ...Noise  
 704/228 ....Post-transmission

2 704/203 (1 OR, 1 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
 704/200 .SPEECH SIGNAL PROCESSING  
 704/201 ..For storage or transmission  
 704/203 ...Transformation

## WEST Search History

DATE: Monday, June 18, 2007

Hide?	<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L10	((("20030023428"   "20040243404")!.PN.) .p150-p173.   (("6240386"   "5873058"   "5706395"   "5966689"   "6173257"   "5455888"   "5915234")!.PN.) .p67-p149.	9
		<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L9	L1 and (noise near5 estimat\$3)	8
<input type="checkbox"/>	L8	L5 and (noise near5 estimat\$3)	11
<input type="checkbox"/>	L7	L5	15
		<i>DB=PGPB; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L6	US-20050071154-A1.did.	1
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L5	L4 and (codebook near5 gain)	16
<input type="checkbox"/>	L4	L3 and (voice near5 signal)	281
<input type="checkbox"/>	L3	partial\$3 near5 decod\$3	6796
<input type="checkbox"/>	L2	partial near5 decod\$3	4362
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L1	(5768474 5185848 5274739 5528723 6182030 4860355 5457783 5596680 5664054 5692104 5966689 5987407 6006179 4980916 5008941 5633982 5649051 5668925 5699477 5706395 5717824 5752223 5787389 5828413 5864794 5875423 5893056 5915234 6006178 6026356 6098037 6173257 6192335 6240386 4805193 4956871 5245662 5293449 5305332 5323486 5371853 5426718 5434947 5451951 5455888 5473727 5479559 5487128 5519806 5570453 ).pn.	50

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 9 of 9 returned.

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L10: Entry 1 of 9

File: PGPB

Dec 2, 2004

PGPUB-DOCUMENT-NUMBER: 20040243404  
DOCUMENT-IDENTIFIER: US 20040243404 A1

TITLE: Method and apparatus for improving voice quality of encoded speech signals  
in a network

PUBLICATION-DATE: December 2, 2004

US-CL-PUBLISHED: 704/225

US-CL-CURRENT: 704/225

INT-CL-PUBLISHED: [07] G10L 19/14

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>G10 L 19/00</u>	20060101
CIPS	<u>G10 L 19/14</u>	20060101

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L10: Entry 2 of 9

File: PGPB

Jan 30, 2003

PGPUB-DOCUMENT-NUMBER: 20030023428  
DOCUMENT-IDENTIFIER: US 20030023428 A1

TITLE: Method and apparatus of mixing audios

PUBLICATION-DATE: January 30, 2003

US-CL-PUBLISHED: 704/201; 709/205, 709/246

US-CL-CURRENT: 704/201; 709/205, 709/246

INT-CL-PUBLISHED: [07] G10L 19/00, G06F 15/16, G10L 21/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>G10 L 19/12</u>	20060101
CIPS	<u>G10 L 19/14</u>	20060101
CIPS	<u>G10 L 19/00</u>	20060101

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L10: Entry 3 of 9

File: USPT

May 29, 2001

US-PAT-NO: 6240386  
DOCUMENT-IDENTIFIER: US 6240386 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Speech codec employing noise classification for noise compensation

DATE-ISSUED: May 29, 2001

US-CL-ISSUED: 704/220; 204/201, 204/226  
US-CL-CURRENT: 704/220; 204/201, 204/226

INT-CL-ISSUED: [07] G10L 21/00, G10L 21/02

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPN	G10 L 11/04	20060101
CIPS	G10 L 19/00	20060101
CIPS	G10 L 21/00	20060101
CIPS	G10 L 19/08	20060101
CIPS	G10 L 19/10	20060101
CIPN	G10 L 11/00	20060101
CIPS	G10 L 19/12	20060101
CIPS	G10 L 19/14	20060101
CIPS	G10 L 21/02	20060101

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L10: Entry 4 of 9

File: USPT

Jan 9, 2001

US-PAT-NO: 6173257  
DOCUMENT-IDENTIFIER: US 6173257 B1

TITLE: Completed fixed codebook for speech encoder

DATE-ISSUED: January 9, 2001

US-CL-ISSUED: 704/220; 704/201, 704/200  
US-CL-CURRENT: 704/220; 704/200, 704/201

INT-CL-ISSUED: [07] G10L 21/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPN	G10 L 11/04	20060101
CIPS	G10 L 19/00	20060101
CIPS	G10 L 21/00	20060101
CIPS	G10 L 19/08	20060101
CIPS	G10 L 19/10	20060101
CIPN	G10 L 11/00	20060101
CIPS	G10 L 19/12	20060101
CIPS	G10 L 19/14	20060101
CIPS	G10 L 21/02	20060101

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L10: Entry 5 of 9

File: USPT

Oct 12, 1999

US-PAT-NO: 5966689  
DOCUMENT-IDENTIFIER: US 5966689 A

TITLE: Adaptive filter and filtering method for low bit rate coding

DATE-ISSUED: October 12, 1999

US-CL-ISSUED: 704/226; 704/219, 704/227

US-CL-CURRENT: 704/226; 704/219, 704/227

INT-CL-ISSUED: [06] G10L 3/02, H04B 1/66

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	<u>H04</u> · <u>B</u> <u>1/66</u>	20060101

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L10: Entry 6 of 9

File: USPT

Jun 22, 1999

US-PAT-NO: 5915234

DOCUMENT-IDENTIFIER: US 5915234 A

TITLE: Method and apparatus for CELP coding an audio signal while distinguishing speech periods and non-speech periods

DATE-ISSUED: June 22, 1999

US-CL-ISSUED: 704/219; 704/226, 704/233

US-CL-CURRENT: 704/219; 704/226, 704/233

INT-CL-ISSUED: [06] G01L 5/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPN	<u>G10</u> <u>L</u> <u>11/00</u>	20060101
CIPN	<u>G10</u> <u>L</u> <u>11/02</u>	20060101
CIPS	<u>G10</u> <u>L</u> <u>19/12</u>	20060101
CIPS	<u>G10</u> <u>L</u> <u>19/00</u>	20060101
CIPN	<u>G10</u> <u>L</u> <u>11/04</u>	20060101

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L10: Entry 7 of 9

File: USPT

Feb 16, 1999

US-PAT-NO: 5873058

DOCUMENT-IDENTIFIER: US 5873058 A

TITLE: Voice coding-and-transmission system with silent period elimination

DATE-ISSUED: February 16, 1999

US-CL-ISSUED: 704/201; 704/230

US-CL-CURRENT: 704/201; 704/230

INT-CL-ISSUED: [06] G10L 3/00



## INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS <u>G10</u> <u>L</u> <u>15/00</u>		20060101
CIPS <u>G10</u> <u>L</u> <u>19/12</u>		20060101
CIPS <u>G10</u> <u>L</u> <u>19/00</u>		20060101
CIPS <u>H03</u> <u>M</u> <u>7/30</u>		20060101
CIPS <u>H03</u> <u>M</u> <u>3/04</u>		20060101
CIPS <u>H04</u> <u>B</u> <u>1/66</u>		20060101
CIPS <u>H04</u> <u>L</u> <u>12/28</u>		20060101
CIPS <u>H03</u> <u>M</u> <u>3/00</u>		20060101
CIPS <u>H04</u> <u>Q</u> <u>3/00</u>		20060101

L10: Entry 8 of 9

File: USPT

Jan 6, 1998

US-PAT-NO: 5706395

DOCUMENT-IDENTIFIER: US 5706395 A

TITLE: Adaptive weiner filtering using a dynamic suppression factor

DATE-ISSUED: January 6, 1998

US-CL-ISSUED: 395/2.35; 395/2.36, 395/2.37

US-CL-CURRENT: 704/226; 704/227, 704/228

INT-CL-ISSUED: [06] G10L 3/02

## INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS <u>G10</u> <u>L</u> <u>21/02</u>		20060101
CIPS <u>G10</u> <u>L</u> <u>21/00</u>		20060101

L10: Entry 9 of 9

File: USPT

Oct 3, 1995

US-PAT-NO: 5455888

DOCUMENT-IDENTIFIER: US 5455888 A

TITLE: Speech bandwidth extension method and apparatus

DATE-ISSUED: October 3, 1995

US-CL-ISSUED: 395/212; 395/2.1, 395/2.17, 395/2.28, 395/2.32

US-CL-CURRENT: 704/203; 704/201, 704/208, 704/219, 704/223

INT-CL-ISSUED: [06] G10L 5/06

## INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS <u>G10</u> <u>L</u> <u>19/00</u>		20060101
CIPS <u>G10</u> <u>L</u> <u>21/02</u>		20060101

CIPS G10 L 19/02 20060101

CIPS G10 L 21/00 20060101

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